UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/633,122	08/04/2000	Theodore Rappaport	02560034aa	1149

30743	7590	01/21/2005

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EXAMINER
SHARON, AYAL I

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/633,122	RAPPAPORT ET AL.
	Examiner	Art Unit	
	Ayal I Sharon	2123	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2004*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-15* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *04 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. Claims 1-15 of U.S. Application 09/633,122, originally filed on 08/04/2000 are presented for examination.

2. Examiner has found Applicants' arguments, filed 10/12/2004 to be persuasive. The prior art rejections have been modified to incorporate newly found prior art. This action is non-final.

3. Moreover, Examiner has found Applicant's Response (filed 10/12/2004) to the Requirement for Information under 37 C.F.R. 1.105 to provide sufficient grounds for withdrawing the 35 U.S.C. 102(b) rejections that were based on the public use or sale of the "SMT Plus" product.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The prior art used for these rejections is as follows:

6. Rappaport, T., et al. <u>SitePlanner ™ 3.0 User's Manual.</u> Wireless Valley Communications. © 1998. (Referred to in this document as "**SitePlanner 3.0**").

7. King. U.S. Patent 6,772,103. (Referred to in this document as "**King**").

8. Ahmed, Mansoor. "Use of Topographic Maps with Building Information to

Determine Antenna Placement for Radio Detection and Tracking in Urban

Environments". MPRG-TR-95-19. Nov. 1995. (Referred to in this document as

"**Ahmed**").

9. **Claims 1-5, 7-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over SitePlanner 3.0 in view of King.

10. In regards to Claim 1, Site Planner 3.0 expressly teaches the following

limitations:

> 1. A method for designing or deploying a communications network.,
> comprising the steps of.
>
>   providing a computerized model which represents a physical
> environment in which a communications network is or will be installed,
> said computerized model providing a display of at least a portion of said
> physical environment;
> (See Site Planner 3.0, especially: pp.7-11)
>
> p.7 teaches that "First, BDM is used to scan in, create, or import drawing
> blueprints of the building or campus under study."
>
> identifying a plurality of system components which may be used in
> said physical environment;
> (See Site Planner 3.0, especially: pp.7-11, pp.79-89, pp.95-104)
>
> p.8 teaches that "Predictor can be used by engineering staff to perform
> computer aided design and experimentation with a vast number of system
> configurations based on a collection of SitePlanner building drawings, ...
> and specific transmitters, channel lists, placement options, and antenna
> systems."
>
> pp.79-89 teach the plurality of options available for adding base stations
> and editing their properties.
>
> pp.95-104 teach the plurality of options available for adding and editing
> antenna systems.

Site Planner 3.0 also expressly teaches "Manipulating components in the Antenna System" (pp.97-99), as well as teaching the plurality of options available for adding and editing base stations (pp.79-89), and antenna systems and subsystems (pp.95-104). This includes identifying, selecting, and representing specific components.

However, Site Planner 3.0 does not expressly teach the use of "component kits", as claimed in the following limitations:

identifying at least one component kit composed of at least two system components of said plurality of system components,

selecting either specific components from said plurality of system components or said at least one component kit for use in said computerized model; and

representing said selected specific components or said at least two system components of said at least one component kit in said display as part of a communications network.

King, on the other hand, does expressly teach the creation, identification, and use of standardized parts kits. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Site Planner 3.0 with those of King, because "It would be an advance in the art of designing and specifying such parts kits if a method could be developed which standardized the process, to at least some degree, and therefore reduced its cost and resulted in a limited number of standardized designs rather than an almost endless variety of custom designs." (King, col.1, lines 34-40).

11. In regards to Claim 2, Site Planner 3.0 teaches the following limitations:

2. The method of claim 1 wherein said second identifying step includes
the steps of

selecting said at least two system components from said plurality of
system components identified in said first identifying step; and
(See Site Planner 3.0, especially: pp.95-105)

Fig.5.12 (p.95) shows the editing of the components of an antenna
system. Fig.5.15 shows the swapping of components in an antenna
system. Fig.5.16 shows the connecting of a new component to an existing
antenna system.

presenting said selected at least two system components as said at
least one component kit in said display.
(See Site Planner 3.0, especially: pp.95-105)

Fig.5.12 (p.95) shows the editing of the components of an antenna
system.

12. In regards to Claim 3, Site Planner 3.0 teaches the following limitations:

3. The method of claim 2 wherein more than one component kit is
presented in said presenting step.
(See Site Planner 3.0, especially: pp.95-105 and Fig.5.12)

p.95 says that "Any number of antennas, amplifiers, connectors, splitters,
cables, and any other component from the bill of materials can be
graphically positioned within the drawing database to form the antenna
system for a given transmitter."

13. In regards to Claim 4, Site Planner 3.0 teaches the following limitations:

4. The method of claim 2 wherein more than two system components are
in said at least one component kit.
(See Site Planner 3.0, especially: pp.95-105 and Fig.5.12)

p.95 says that "Any number of antennas, amplifiers, connectors, splitters,
cables, and any other component from the bill of materials can be
graphically positioned within the drawing database to form the antenna
system for a given transmitter."

14. In regards to Claim 5, Site Planner 3.0 teaches the following limitations:

5. The method of claim 1 further comprising the step of generating a bill
of materials containing cost information for said selected specific

components or said at least two system components of said at least one
component kit utilized in said communications network.
(See Site Planner 3.0, especially: pp.89-91 "Bill of Materials")

Fig.5.9, on p.91, has a field for "Cost(US$)"

15. In regards to Claim 7, Site Planner 3.0 teaches the following limitations:

7. The method of claim 1 wherein said system components have
performance attributes associated with them, and further comprising the
step of running prediction models using the computerized model and said
performance attributes to predict performance characteristics of said
communications network.
(See Site Planner 3.0, especially: pp.7-11 and pp.113-126)

p.8 teaches that "Predictor can be used by engineering staff to perform
computer aided design and experimentation with a vast number of system
configurations based on a collection of SitePlanner building drawings, cost
and coverage target parameters, and specific transmitters, channel lists,
placement options, and antenna systems.

p.123 teaches that "Coverage Prediction mode allows you to specify
boundary regions where you would like to see a certain level of received
signal strength, signal-to-interference ratio, or signal-to-noise ratio, and
then it predicts and displays those boundaries as closed contours directly
on the drawing".

16. In regards to Claim 8, Site Planner 3.0 teaches the following limitations:

8. The method of claim 7 further comprising the steps of measuring
performance data in said physical environment and presenting the
measured performance data in said display.
(See Site Planner 3.0, especially: pp.7-11 and pp.127-140)

p.9 teaches that "Once the pre-design phase of Predictor is carried out,
and the customer approves the deployment of the wireless network,
InFielder is then used to perform rapid field measurements ... InFielder
modifies the database by writing (overlaying) field measurements upon the
predictive contours produced by Predictor. Drawing files modified by
InFielder contain an 'I' in the drawing legend."

17. In regards to Claim 9, Site Planner 3.0 teaches the following limitations:

9. The method of claim 7 further comprising the steps of measuring
performance data in said physical environment and comparing results from
said prediction models to said measured performance data.
(See Site Planner 3.0, especially: pp.7-11 and pp.127-140)

p.9 teaches that "Once the pre-design phase of Predictor is carried out, and the customer approves the deployment of the wireless network, InFielder is then used to perform rapid field measurements ... InFielder modifies the database by writing (overlaying) field measurements upon the predictive contours produced by Predictor. Drawing files modified by InFielder contain an 'I' in the drawing legend."

18. In regards to Claim 10, Site Planner 3.0 teaches the following limitations:

> 10. An apparatus for designing and deploying a communications network, comprising:
>   a means for providing
>
>   (I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

(See Site Planner 3.0, especially: pp.7-11)

p.7 teaches that "First, BDM is used to scan in, create, or import drawing blueprints of the building or campus under study."

> (II) performance attributes for a plurality of system components which may be used in said physical environment,

(See Site Planner 3.0, especially: pp.83-84)

pp.83-84 teach a means for providing performance attributes to base stations.

> means for identifying a plurality of system components which may be used in said physical environment;

(See Site Planner 3.0, especially: pp.7-11, pp.79-89, pp.95-104)

p.8 teaches that "Predictor can be used by engineering staff to perform computer aided design and experimentation with a vast number of system configurations based on a collection of SitePlanner building drawings, ... and specific transmitters, channel lists, placement options, and antenna systems."

pp.79-89 teach the plurality of options available for adding base stations and editing their properties.

pp.95-104 teach the plurality of options available for adding and editing antenna systems.

Site Planner 3.0 also expressly teaches "Manipulating components in the Antenna System" (pp.97-99), as well as teaching the plurality of options available for adding and editing base stations (pp.79-89), and antenna systems and subsystems (pp.95-104). This includes identifying, selecting, and representing specific components.

However, Site Planner 3.0 does not expressly teach the use of "component kits", as claimed in the following limitations:

> means for identifying at least one component kit composed of at least two system components of said plurality of system components;
>
> means for selecting either specific components from said plurality of system components or said at least one component kit for use in said computerized model; and
>
> means for representing said selected specific components or said at least two system components of said at least one component kit in said display as part of a communications network.

King, on the other hand, does expressly teach the creation, identification, and use of standardized parts kits. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Site Planner 3.0 with those of King, because "It would be an advance in the art of designing and specifying such parts kits if a method could be developed which standardized the process, to at least some degree, and therefore reduced its cost and resulted in a limited number of standardized designs rather than an almost endless variety of custom designs." (King, col.1, lines 34-40).

19. In regards to Claim 11, Site Planner 3.0 teaches the following limitations:

11. The apparatus of claim 10 further comprising a means for generating a
bill of materials containing cost information for said selected specific
components utilized in said communications network.
(See Site Planner 3.0, especially: pp.89-91 "Bill of Materials")

Fig.5.9, on p.91, has a field for "Cost(US$)"

20. In regards to Claim 13, Site Planner 3.0 teaches the following limitations:

13. The apparatus of claim 10 further comprising
        means for associating performance attributes with said system
components; and
(See Site Planner 3.0, especially: pp.7-11 and pp.113-126)

p.8 teaches that "Predictor can be used by engineering staff to perform
computer aided design and experimentation with a vast number of system
configurations based on a collection of SitePlanner building drawings, cost
and coverage target parameters, and specific transmitters, channel lists,
placement options, and antenna systems.

        means for running prediction models using the computerized model
and said performance attributes to predict performance characteristics of
said communications network.
(See Site Planner 3.0, especially: pp.7-11 and pp.113-126)

p.123 teaches that "Coverage Prediction mode allows you to specify
boundary regions where you would like to see a certain level of received
signal strength, signal-to-interference ratio, or signal-to-noise ratio, and
then it predicts and displays those boundaries as closed contours directly
on the drawing".

21. In regards to Claim 14, Site Planner 3.0 teaches the following limitations:

14. The apparatus of claim 13 further comprising a means for measuring
performance data and presenting the measured performance data in said
display.
(See Site Planner 3.0, especially: pp.7-11 and pp.127-140)

p.9 teaches that "Once the pre-design phase of Predictor is carried out,
and the customer approves the deployment of the wireless network,
InFielder is then used to perform rapid field measurements ... InFielder
modifies the database by writing (overlaying) field measurements upon the
predictive contours produced by Predictor. Drawing files modified by
InFielder contain an 'I' in the drawing legend."

22. In regards to Claim 15, Site Planner 3.0 teaches the following limitations:

15. The apparatus of claim 13 further comprising a means for comparing
measured performance data with results from said prediction models.
(See Site Planner 3.0, especially: pp.7-11 and pp.127-140)

p.9 teaches that "Once the pre-design phase of Predictor is carried out,
and the customer approves the deployment of the wireless network,
InFielder is then used to perform rapid field measurements ... InFielder
modifies the database by writing (overlaying) field measurements upon the
predictive contours produced by Predictor. Drawing files modified by
InFielder contain an 'I' in the drawing legend."

23. **Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over SitePlanner 3.0 in view of King and further in view of Ahmed.**

24. In regards to Claim 6, Site Planner 3.0 does not expressly teach the following

limitations:

6. The method of claim 1 wherein said display is three dimensional.

Ahmed, on the other hand, does expressly teach the use of a 3D display

in propagation prediction using ray tracing. (See p.7, Figure 2.1 – Item "Trace

Rays in 3D", and p.92, Figure 7.2, "Rays traced for receiver 40.)

It would have been obvious to one of ordinary skill in the art to modify the

teachings of SitePlanner 3.0 with those of Ahmed, because doing so enables the

prediction of signal strength and power delay profile (see p.6, last paragraph, and

p.7, Fig.2.1).

25. In regards to Claim 12, Site Planner 3.0 does not expressly teach the following

limitations:

12. The apparatus of claim 10 wherein said display is three dimensional.

Ahmed, on the other hand, does expressly teach the use of a 3D display

in propagation prediction using ray tracing. (See p.7, Figure 2.1 – Item "Trace

Rays in 3D", and p.92, Figure 7.2, "Rays traced for receiver 40.)

It would have been obvious to one of ordinary skill in the art to modify the

teachings of SitePlanner 3.0 with those of Ahmed, because doing so enables the

prediction of signal strength and power delay profile (see p.6, last paragraph, and

p.7, Fig.2.1).

Response to Arguments

26. Applicant's arguments with respect to claims 1 and 10 and their dependent

claims have been considered. These arguments are no longer relevant in view of

the new ground(s) of rejection.

Correspondence Information

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Ayal I. Sharon whose telephone number is

(703) 306-0297. The examiner can normally be reached on Monday through

Thursday, and the first Friday of a biweek, 8:30 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on (703) 305-9704. Any response to this office action should be mailed to:

Director of Patents and Trademarks
Washington, DC 20231

Hand-delivered responses should be brought to the following office:

4th floor receptionist's office
Crystal Park 2
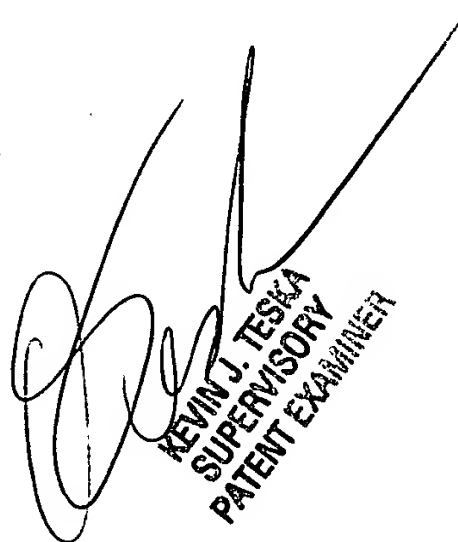2121 Crystal Drive
Arlington, VA

The fax phone number is: (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, whose telephone number is: (703) 305-3900.

Ayal I. Sharon

Art Unit 2123

March 5, 2004